Strengthening Points for Policy Plan 2 with Tangible Evidence



1. Infrastructure Development

Objective: Enhance roads, highways, and parking facilities in Tbilisi to support increased car usage.

Benefit: Improved infrastructure will reduce traffic congestion and enhance the overall driving experience for residents.

Evidence:

- Enhanced road infrastructure can significantly reduce traffic congestion, improve road safety, and support economic growth. For example, maintaining and expanding road networks can reduce accidents and improve travel times, which in turn benefits local businesses and commuters by increasing productivity and reducing transportation costs (McKinsey & Company) (PTV Mobility).
- A well-maintained and expanded infrastructure can also attract investments and improve
 the city's competitiveness by facilitating smoother logistics and connectivity (<u>McKinsey & Company</u>).

2. EV Charging Network and Incentives for EV Adoption

Objective: Install a widespread network of fast and convenient EV charging stations throughout Tbilisi and offer tax credits, rebates, and other financial incentives for purchasing electric vehicles. **Benefit:** Increased accessibility to charging stations will encourage the adoption of electric vehicles, reducing carbon emissions and improving air quality. Financial incentives will lower the cost barrier, making EVs more affordable and attractive to Tbilisi's residents.

Evidence:

- The installation of a robust EV charging network can encourage the adoption of electric vehicles by addressing range anxiety and making EVs a more viable option for residents. Studies show that widespread availability of fast chargers significantly boosts EV ownership and usage (Intel).
- Financial incentives such as tax credits and rebates have proven effective in increasing EV adoption. For instance, regions that have implemented these incentives have seen a significant rise in EV purchases, leading to reduced greenhouse gas emissions and improved air quality (McKinsey & Company).
- Incentives can also stimulate economic growth by creating jobs in the EV manufacturing and infrastructure sectors, thereby supporting the local economy (<u>PTV Mobility</u>).

3. Technological Integration

Objective: Utilize smart grids and renewable energy sources for EV charging stations. **Benefit:** This integration will maximize environmental benefits and further reduce our dependence on fossil fuels.

Evidence:

- Using smart grids and renewable energy sources for EV charging can optimize energy use and reduce the environmental impact. Smart grids can manage energy distribution efficiently, ensuring that EVs are charged during off-peak hours, which lowers electricity costs and reduces strain on the grid (McKinsey & Company).
- Incorporating renewable energy into the charging infrastructure supports the transition to a more sustainable energy system, reducing the reliance on fossil fuels and decreasing overall emissions (Intel).

Addressing Concerns:

Electric Energy Usage for EVs

• Integration with Renewable Energy: By integrating EV charging stations with renewable energy sources, Tbilisi can minimize the environmental impact of increased electricity demand. Smart grids and renewable energy systems can ensure that the additional energy required for EVs is generated sustainably, thereby reducing the carbon footprint (McKinsey & Company) (Intel).

• **Smart Charging Solutions:** Implementing smart charging solutions can optimize when and how EVs are charged, further reducing peak electricity demand and promoting efficient energy use (McKinsey & Company).

Recycling Dead Batteries of Vehicles

- Advanced Recycling Technologies: The development of advanced recycling technologies ensures that valuable materials from EV batteries are recovered and reused, minimizing environmental harm. Continuous improvements in recycling processes are making it more efficient and safe to extract materials like lithium and cobalt (Intel).
- **Second-Life Applications:** Before being recycled, EV batteries can be repurposed for secondary uses such as energy storage systems for homes or businesses. This not only extends the life of the batteries but also supports energy resilience and sustainability efforts (McKinsey & Company).